

ABSTRACT

1 A multiple-zone power control system for controlling electric heating
2 elements, including a power control unit having multiple control zones, a
3 touch-sensitive function key, and a touch-sensitive on/off key for activating and
4 deactivating one of the control zones. When all of the control zones are deactivated,
5 the touch-sensitive key must be touched for at least a cold start duration in order to
6 activate the designated control zone. Alternatively, the designated control zone is
7 prevented from being activated if the touch-sensitive function key is touched while the
8 touch-sensitive on/off key is being touched. The control system also includes two
9 power controllers connected by a communication bus. When one of the power
10 controllers initiates a lockout condition, the other power controller initiates a
11 corresponding lockout condition. Multiple heating elements can be controlled
12 together using a single set of control keys. A element size key toggles between
13 different combinations of heating elements to control.